



UV-100 System

Ultra Violet Water Sterilizer

Description

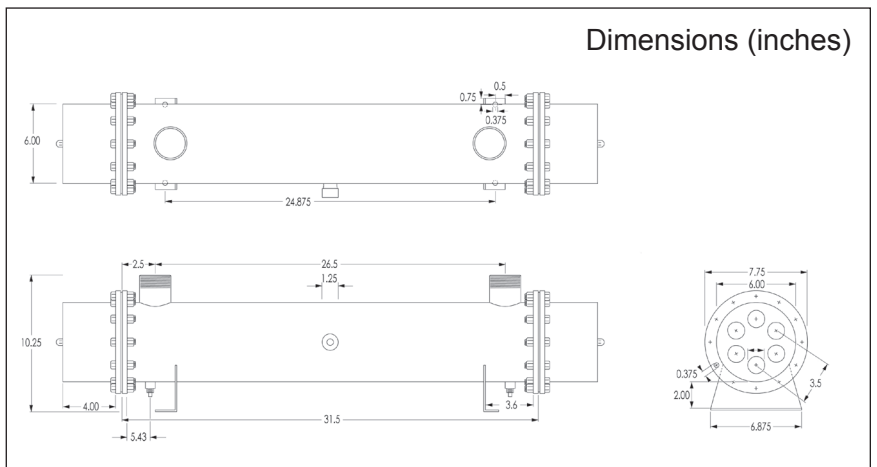
The UV-100 System is a small footprint, robust, efficient and cost-effective sterilizer designed for the disinfection of drinking and/or process water in commercial and industrial applications at flow rates up to 100 GPM (380 LPM).

The UV-100 System contains an array of 6 low-pressure, high output UV lamps in a 316L stainless steel reaction chamber. It is equipped with a control panel that has an integrated UV Monitor to monitor the UV light intensity in real time. The UV monitor will alarm if the UV power delivered to the water is inadequate. A powered contact on the monitor can be used to drive a solenoid-type valve to shut off the flow of water.

Additional features for this sterilizer can be ordered, such as a thermo-sensitive purge valve at the out port to prevent overheating in no-flow conditions, or volt-free contacts on the ballast for remote signaling.

This system may be connected in series or in parallel for high-dose or high-volume applications, and complete systems including high-volume pre-filtration can be configured.

The UV-100 kills most microbiological contaminants, such as bacteria, protozoa and viruses with a powerful UV disinfection dose that will inactivate the pathogens at a kill rate of 99.99% (log 4) or more (*Giardia*, *E. coli*, *Cryptosporidium*, *Vibrio cholerae*, *Legionella*, *Salmonella*, *Shigella*, *Streptococcus* and many others)



Features

- ▶ 6 UV Lamp Array
- ▶ Single UV Monitor
- ▶ 316L Stainless Steel
- ▶ Compact Footprint
- ▶ Rugged Construction
- ▶ NEMA Control Panel
- ▶ Individual Lamp Indicators



Benefits

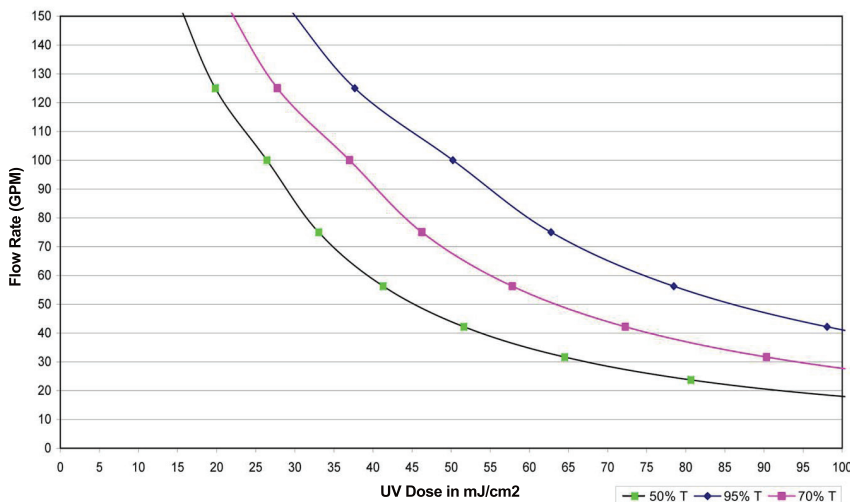
- ▶ High Volume Disinfection, Low Cost per Litre
- ▶ Extreme UV Dose Available for Many Applications
- ▶ Larger Flow Rates Possible with Manifolding
- ▶ May be Configured for Redundant Operations
- ▶ Systems May be Skid Mounted for Ease of Transport and Installation
- ▶ Extremely Simple to Use and Maintain



Rated Flow:	379 litres per minute (100 GPM) 22,740 litres/hour (22.7 m ³ /h), 546 m ³ /day (6,000 gallons/hour, 144,000 gallons/day)
Initial UV Dose at Rated Flow:	49 mJ/cm ² (49,000 μWsec/cm ²) @ 95% UVT 37 mJ/cm ² (37,000 μWsec/cm ²) @ 70% UVT
Electrical:	110-130 Volt AC / 50-60 Hz (Part # P100/QD4E-1) 220-240 Volt AC / 50-60 Hz (Part # P100/QD4E-2)
Power Consumption:	450 VA @ 120 V, 520 VA @ 230 V
Ballast:	Electronic Ballast (6) (Part # 4-13B-PN) w/ Lamp Out Alarm (1), Power LED (6)
Lamps, Wattage, Current:	6 Lamps (at 84 Watts each, 800 mA) (Part # RL-84/893T5)
UV Monitor:	Integrated
Size and Weight (Chamber):	46x8x10.5 inches, 90 lbs / 41 kg
Max. Operating Temperature:	37 °C (98.6 °F)
Max. Operating Pressure:	125 psi - 8.6 bar
Plumbing:	2" MNPT In/Out (Flanges optional)
Chamber Material:	316L Stainless Steel
Control Panel:	NEMA IV Box, 20x18x10 inches, Non-Metallic Includes Lamp LEDs, Power Switch, UV Monitor Meter Face
Size & Weight of Shipment:	1 skid (crated) 54x25x32 inches, 180 lbs / 82 kg

Dose Chart

UV-100 UV Dose Response Curve



Additional Features

(Optional):

- 2" Solenoid Valve for Fail-Safe Operation, triggered by UV Monitor
- 4-20 mA Output for BMS/PLC Connection, Remote Operation Signaling and Logging
- Purge Valve at Out Port for Overheat Protection
- Integrated Surge Suppressor
- Hour-Meter on Panel Face
- Mounted on SS Skid

Filtration

This UV System assumes certain water quality parameters to be met for proper operation. If the source water does not meet the following criteria, pretreatment has to be considered and additional cleaning and maintenance of the UV system will be required.

Turbidity (Suspended Solids): must be < 1 NTU at the time of disinfection. There must be a 5 micron (or less) sediment prefiltration system installed before the UV system.

Total Hardness (Sum of Calcium and Magnesium): Must be < 10 gpg (grains per gallon)

Iron: Must be < 0.3 ppm (parts per million)

Manganese: Must be < 0.05 ppm

TDS (Total Dissolved Solids): Must not exceed 500 ppm